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**ABSTRACT OF THE DISCLOSURE**

Interference cancellation is performed in a communication system. A signal associated with the users is received to produce a received signal. A set of regeneration factors associated with the users is determined based on the received signal. A frequency range associated with a first user from the users has at least a portion overlapping with at least a portion of a frequency range associated with a second user from the users. A time range associated with the first user from the users has at least a portion overlapping with at least a portion of a time range associated with the second user from the users. A regenerated signal associated with each user from the users is modified based on the determined regenerated factor associated with that user to produce a modified regenerated signal for each user.